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Edited by F. R. Moulton and Sam Woodley.

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William Lyon Phelps

In the death of William Lyon Phelps, on August 21, the Association lost one of its most distinguished members. His membership in the Association was only one of many unexpected evidences of the breadth of his interests. Although his great reputation was based largely upon his rare personal qualities and upon his gifts as a teacher of English literature, yet his active mind wandered widely, and often somewhat quizzically, through far distant gardens that other rare spirits were cultivating. Sometimes in his excursions he followed scientists in their explorations, not interesting himself in the technical skeletons of their theories but in the aesthetic and philosophical flesh that clothed them. For this reason he became a member of the Association.

When Phelps announced a lecture on "Science and Poetry," many of his friends thought he was joking. In a sense he was having fun, but in a deeper sense he was much in earnest. He began his lecture by stating that poetry is more nearly true than science and that he would prove it by scientists themselves. His demonstration was direct and simple. He noted the fact that when a scholar desires to purchase a great poetic work, he seeks to get a copy of its first edition and is willing to pay a premium for it. This, he stated, is evidence of its lasting value. On the other hand, when a scientist desires to get an authoritative book on any field, he will take none but the latest edition because all earlier ones are erroneous and have become obsolete.

This jesting contrast was not merely for the purpose of making sport of scientists. It was for the much deeper purpose of reminding them that their science in a certain sense is transitory, a fact that they themselves realize when they remember that theories are only convenient and temporarily satisfactory descriptions of the phenomena they are formulated to explain. No scientist would maintain that his knowledge of any class of phenomena is so complete that no addition to it can ever be made, and consequently that his description (theory) of it will never be changed. How then, Phelps would ask, can any scientist believe that he has even approached absolute truth in any field? There is no defense to such questions. The modified and abandoned theories that scientists find strewn along their paths from primitive superstitions up to the achievements of the present day rise up like spectres whenever they think they are attaining perfection. There appears to be a relativity in all science and scientific theories as well as in the space and time of Einstein's theory of the physical universe.

Phelps did not suggest that absolute truth is found in poetry, but he did maintain that poets sometimes, by an inexplicable intuition or inspiration, catch glimpses of realities that are beyond the reach of experiment and express them in terms that arouse echoes in the mind, echoes from the infinite experience of the race. He illustrated his statements by quotations from Shakespeare and from Robert Browning, and by the incomparable "Remembrance" of Emily Brontë. He did not, however, contrast science and poetry as rivals, but insisted on the much they have in common—not in their methods, but in the inspirations from which they flow.

It is beyond question that both great scientists and great poets are artists, moved largely by the aesthetic enjoyment their work gives them. A. A. Michelson, the first American Nobel prize winner, will illustrate the point. In everything he did, whether it was work or play, he was an artist. He took equal delight in finding the cause of the iridescence of the butterfly's wing and in conducting the ether-drift experiments by which he laid the experimental foundation for the theory of relativity. To him values were not

measured by the acclaim of the world. To his friends he was like the sea on a summer's day—serene, illimitable, unfathomable.

Though Michelson and Phelps necessarily expressed themselves in widely different terms, fundamentally they were much alike, illustrating Phelps' thesis that great scientists and literary men have important characteristics in common. They both rose to great heights of achievement and fame at the zeniths of their lives, and then passed along serenely, busily and happily into the sunset. Those who knew Phelps well can easily believe that he passed into "the undiscover'd country from whose bourne no traveller returns," saying with Tennyson:

Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell,
When I embark;

For tho' from out our bourne of Time and Place
The flood may bear me far,
I hope to see the Pilot face to face
When I have crossed the bar.

—F.R.M.

Resolutions by the Association

There is no other organization that can speak so appropriately for American scientists as the American Association for the Advancement of Science. It speaks not only for its own 25,000 members but in a sense for the hundreds of thousands of members of its affiliated societies, because they have representatives on its Council who participate in the determination of its policies. It speaks for scientists in practically all fields because its 15 sections together cover widely the natural and social sciences, while the interests of its 138 affiliated societies are as varied and inclusive as the interests of modern science itself.

In recent months the Council of the Association has passed three resolutions, one on the interrelations of scientists in the Western Hemisphere, one on the support of the Government in the war, and the third on the Science Mobilization Bill (S.702). Obviously the subjects are of interest to all scientists, whatever their special field. As to the methods for determining and expressing the general opinion of the members of the Association and of its affiliated societies, the policy-making machinery of the Association has evolved strictly along the lines of representative government. Of the 254 members of the Council, in which all power is lodged, 52 are elected by the Association, 167 independently by the affiliated scientific societies and 35 by affiliated academies of science. These 254 members of the Council are chosen from among the most eminent American scientists and together represent every important field of the natural and social sciences. The largest representation is in the medical sciences, including public health, dentistry and pharmacy, and even this great field has only 38 members on the Council, or less than 15 per cent of its entire membership.

Only under dictatorships do men always reach unanimous decisions. The Congress of the United States rarely votes unanimously on any measure, decisions of the Supreme Court are nearly always by divided vote, and even the Constitution of the United States, for more than a century regarded as an inspired and almost sacred document, was passed after nearly three years of discussion in the Constitutional Convention only by the narrowest margin, with 16 of the 65 delegates refusing to sign it after it had been adopted by a majority vote.

In view of the fact that men normally differ widely on nearly every subject, it is an interesting fact that the three resolutions recently passed by mail vote of the Council have all been approved by very large majorities. The resolution on interrelations among scientists passed by 154 favorable votes to 25 votes of approval with qualifications, as was reported in the June issue of the A.A.A.S. Bulletin, while the resolution in support of the war efforts of the Government was passed by 172 favoring to 15 voting with reservations. Finally, the vote of the Council on the Science Mobilization Bill (S.702), as reported in the August issue of the A.A.A.S. Bulletin, was 146 in favor of the resolution opposing the bill, 5 in opposition to the resolution, with 7 defective and incomplete ballots.

These resolutions received very large votes by the Council because they unquestionably were regarded as important by scientists in essentially every field. Of the three, the resolution on the Science Mobilization Bill received the largest majority (more than 96 per cent), indicating that scientists had given it serious consideration during the months it was discussed in *Science*, the daily press and elsewhere. The most recent of these discussions is an article in the August 13 issue of *Science* by Senator H. M. Kilgore, sponsor of the bill in the Senate. In this article he stated, "More than a thousand letters have come to me about S.702." He neglected to say, however, that last April he wrote a circular letter to the members of the National Academy of Sciences, in which he quoted a sentence from a resolution passed by the Association in 1934, on quite a different subject, imbedding it in such an unfor-

tunate way in his paragraph that readers almost unanimously understood him to mean that the Association had currently passed a resolution in support of his bill. He also neglected to state that at a later date he had written other letters, including a circular letter to officers of the Association, thus leaving open to his readers the conclusion that the "thousand letters" were spontaneously written to him.

He continued as follows: "From these letters I find that the men of science favor the bill. The vested interests, and those who are influenced or controlled by the vested interests, are against it, and they are most unscientific in their attacks upon it." Doubtless the 146 members of the Council of the Association, chosen from among the foremost of American scientists, will be even more than mildly interested in this frank political definition of "men of science."

Nominations for President of the Association

In an organization having 25,000 members the establishment of a practicable democratic process for electing its president presents some difficulties. To conduct a mail nominating ballot and to follow with a mail election ballot would cost in stationery, postage and clerical work about $5,000. Such an expense is prohibitory, but a close approach to this ideal method of electing presidents of the Association has been devised and put into effect.

Under the provisions of the Constitution of the Association all officers of the Association are elected by the Council, which is now composed of about 250 members. In July a nomination ballot form was sent to each member of the Council for his use in recording his choice for President of the Association. For the information of the members of the Council, the names of the 20 most recent past presidents of the Association were listed, together with the respective fields of their major scientific interest. Although a considerable number of members of the Council are out of reach by mail because of their war work, 154 nominating ballots were received. The fact that 71 different men were placed in nomination and no one received more than 19 votes would prove, if proof were necessary, that there was no collusion in the voting.

In order to give the entire membership of the Association an opportunity to express its preference for President, on October 1 each member will be sent his statement of account for next year and also a nomination ballot, containing the names of the leading 16 nominees by the Council. Members may vote for any one of the 16 nominees of the Council or for any other fellow of the Association. The result of this general membership ballot will be published in the A.A.A.S. BULLETIN and also sent to the Council for its information and guidance.

The final step in the election of a President of the Association for 1944 will be taken in December when the Council will take its final ballot, which will be by mail. Until this current year presidents of the Association have been elected by the Council at annual meetings. The pressure for time is so great at annual meetings of the Association that rarely have more than 60 or 70 members of the Council been able to participate in the election of a president. The mail ballot of the Council was so successful last year, when it became necessary to cancel the New York meeting, that it will probably be adopted as the regular procedure for electing presidents of the Association in the future. Members are invited to express their views respecting methods of electing presidents of the Association when they send their nominating ballots in October.

Astronomy in Time of War

It is clear why there should be great interest at present in such scientific fields as those of physics, chemistry and medicine, but it is not so easy to see why astronomy also should be vigorously cultivated. Yet the work of the astronomers goes on actively in many lands—England, Holland, France, Germany, Sweden, Italy, Russia, and the United States.

That scientists engaged in work far removed from the ordinary affairs of life should pursue their ways even when civilization appears to be threatened with destruction is not new. Archimedes, at Syracuse, continued to draw his geometric diagrams in the sand until Roman invaders struck him down with their swords. Leverrier continued his calculations of the motions of the planets at the Paris Observatory until the day that the Germans occupied Paris in 1870. A committee for the distribution of astronomical literature now functions throughout the world, and Bart J. Bok, of Harvard College Observatory, as the representative of the American Astronomical Society, sends out a *Monthly Astronomical News Letter* which contains brief summaries of current astronomical literature from practically all of the countries in which astronomy has flourished. As examples of the publications that are appearing this year, a publi-

cation of the Astronomical Institute of Amsterdam contains a long paper on dark nebulae; in Germany two important books have been published, one on stars and stellar systems and another on theories of cosmology; in Sweden recently discovered observations of the variable star Mira for the interval 1751–1782 have appeared in the Stockholm Annals; the Russians have reported on the solar eclipse of 1941 and the British have several papers on the spectrum of an interesting variable star in the Constellation Auriga.

As reports on the progress of science, these rather vague references to recent astronomical publications have no value. But for the light they shed on characteristics of the human mind they are important. They show that the passions let loose in the present world storms have not burned out the longings men have for greater knowledge of the universe about them nor destroyed their confidence that this knowledge is leading them toward wisdom and happiness.

Appointment of Director of Publications

At a meeting held in Washington on August 22, the Executive Committee voted to create in the Office of the Permanent Secretary a new position, Director of Publications, and appointed Dr. Frank Leslie Campbell, Professor of Entomology in The Ohio State University, to the position.

This new office was created for two principal reasons. One was that the Association has become so large and its work so varied and heavy that as soon as meetings can be held again the present administrative staff must be increased substantially in order to carry the load.

The second reason was that the publications of the Association, particularly the symposia, promise to increase greatly immediately after the close of the war. Even since the attack by the Japanese on Pearl Harbor, five symposia have been published, a sixth is now being bound and two are on the way. Moreover, soon after the war ends it will be necessary to publish a new Summarized Proceedings for the period since January 1, 1940. This volume of about 1,600 pages will include, in addition to the principal activities of the Association and its divisions, a historical sketch of each of its 103 affiliated societies, a directory of all members of the Association since 1939 and a geographical index of all members at the time of its publication. Finally, the A.A.A.S. BULLETIN and *The Scientific Monthly* are to be edited and published each month, a total of about 1,300 pages per year.

Dr. Campbell, who has been appointed Director of Publications, received the B.S. degree from the University of Pennsylvania in 1921, the M.S. degree from Rutgers University in 1924, and the Sc.D. degree from Harvard University in 1926. He has held positions in the New Jersey Experiment Station (1922–24), New York University (1926–1927), Bureau of Entomology and Plant Pathology of the U. S. Department of Agriculture (1927–36), The Ohio State University (1936–1943), and as insecticide adviser of the Government in 1942. He has had 12 years of editorial experience and now becomes an executive officer of the Association.

Proposed Reproduction of Sylloge Fungorum

Mycologists and plant pathologists of the Western Hemisphere have been much handicapped through the years by the unavailability or the excessive prices of certain fundamental reference books originally prepared and published in Europe. The Alien U. S. Property Custodian has set up a procedure to be followed in issuing American editions of certain of these publications. Among those under consideration is the classical *Sylloge Fungorum* of Saccardo, a 25-volume work containing technical descriptions of all known species of fungi. It has been ascertained that a satisfactory off-set edition can be produced at approximately $200 per set if 100 subscriptions are offered. Further information about the project can be obtained from John A. Stevenson, U. S. Bureau of Plant Industry Station, Beltsville, Md.

The New Fiscal Year and Dues

In the A.A.A.S. BULLETIN for September, 1942, an article was published on the fiscal year and the payment of dues, the intention being to stimulate prompt payment of dues so as to save the cost of rebilling. Instead of 60 per cent of the members paying dues by December 1, as in preceding years, there were 65 per cent, and by January 1, 1943, there were about 80 per cent, instead of 70 to 75 per cent. Although the current fiscal year may close with approximately the same percentage of members in arrears as last year, the main objective was partially achieved, namely, a saving (about $225) in the cost of repeated billings to large numbers.

By the time this number of the BULLETIN is in the hands of members, work will have been started on the billing for 1944 dues. The statements will be mailed to reach all members ap-

proximately on October 1. With the bill will be enclosed a nomination blank for President of the Association for 1944. Since the election will be by mail ballot of the Council, members are urged to return their ballots, together with their checks for dues, as promptly as possible.

The October Scientific Monthly

Each month *The Scientific Monthly* consists of 9 principal articles, a section containing book reviews, and a section of short articles, usually illustrated, on the progress of science. The 9 principal articles fill about 80 pages and an entire issue consists of 96 pages, or 1152 pages (2 vols.) per year.

The titles of the 9 principal articles of the October issue, which is No. 4 of vol. 57, are as follows:

Wind and Soil. Dr. William Herbert Hobbs
Paper and Civilization. Victor W. von Hagen
Agassiz' School on Penikese. Dr. Louis C. Cornish
Anomalies in Color Vision. Dr. Elsie Murray
The Callao Painter. Dr. Eliot G. Mears
Sociological Excursions of Biologists. Dr. Leo Kartman
Problems of the Dehydration Industry. Donald K. Tressler
Racial Status and Personality Development. Allison Davis
The Age of Flowering Plants. Professor Edward W. Berry

Members of the Association who do not receive *The Scientific Monthly* free may receive it for $3 per year in addition to their membership dues. The subscription rate for persons who are not members of the Association is $5 per calendar year; single copies, 50 cents.

The 1943 AAAS-Gibson Island Research Conferences on Chemistry

On August 20 the sixth series of AAAS-Gibson Island special research conferences on chemistry and related fields came to a close. In all 10 conferences were held on successive weeks during the summer, each one beginning on Monday morning and closing on Friday afternoon. It is expected that the papers presented at two of these conferences, the one on "Hormones" and the one on "Corrosion," will be published as volumes in the Association's symposia series.

In spite of the war the 10 conferences held between June 14 and August 20 have been so successful that plans have been completed for holding 11 conferences next summer. As heretofore, the registration will be limited to 60 persons for each conference in order to preserve their unique character. The chairman and vice chairman of each conference are appointed by the Association upon the nomination of those who have attended the corresponding conference the preceding year or who have organized the program for a conference on a new subject.

The Association has established a Policy Committee for the conferences as a whole, consisting of a representative nominated by each of the 29 companies which have contributed to the purchase of the property in which the conferences are held, and of the chairmen and vice chairmen of the conferences for the year. The Policy Committee meets at the time of the autumn meeting of the American Chemical Society.

Organized Mechanical Engineers

When the historical sketches of affiliated societies were begun in the BULLETIN a few months ago, it was expected that scientists would be interested primarily in the articles on their own societies. It has turned out, however, that they learn most from the histories and organizations of other societies. In this issue The American Society of Mechanical Engineers presents a remarkable story of the development of a scientific society and a model of organization. No one can read this outline without feeling rewarded by its stimulating effects.

Sixty-three years ago John Edson Sweet, professor of practical mechanics at Cornell University, Robert Henry Thurston, professor of mechanical engineering at Stevens Institute of Technology, and Alexander Lyman Holley, who was instrumental in bringing to this country the Bessemer process of manufacturing steel, called a meeting, on February 16, 1880, at the offices of the *American Machinist* in New York, where plans were laid for the organization of The American Society of Mechanical Engineers. At this meeting Mr. Holley delivered an address in which he advanced three reasons for the establishment of a society of mechanical engineers: (1) The "collection and diffusion of definite and much needed information, by means of papers and discussion"; (2) the "general personal acquaintance thus promoted . . . among engineers and the businessmen associated with them"; and (3) the "habit of writing and discussing technical papers . . . which engenders habits of thought at once rapid and accurate."

Organization of the new society was perfected at a second meeting held on April 7, 1880, at the Stevens Institute of Technology, Hoboken, N. J., at which Henry R. Worthington presided and Robert Henry Thurston was elected first president of the Society.

At the first annual meeting, held in New York on November 4 and 5, 1880, Prof. Thurston delivered the President's inaugural address in which he also discussed the objects of the Society. He spoke definitely of publication of the papers read and discussed, thus to build up a needed literature, and of the "gleaning from the great mass of technical literature . . . such papers, wherever published . . . and presenting them, either in full or by abstract, to its own members. . . ." He envisioned a Society headquarters as "an attractive resort socially." He said that "the Society's province will lie no less in the field of social economy than in that which has reference only to the individual interests of the members." He hoped that it might aid "in the encouragement of the useful arts, in the intelligent direction of the education of the people, and in the enlightenment of our national legislators in regard to the needs, the wishes, and the legal moral rights of the industrial classes in our country."

By the first annual meeting, the membership numbered 189, the Council had met several times, funds in the bank amounted to $2,563.93, and committees had been appointed. In 1883 Frederick Remsen Hutton, professor of mechanical engineering at Columbia University, became national secretary, a position which he held concurrently with his Columbia post until 1906, when he became president of the Society. Calvin W. Rice, then succeeded Prof. Hutton and devoted his entire time and energy as national secretary of the Society from 1906 until his sudden death in 1934.

If a generalization on the characteristics of the two phases of Society history roughly covered by the secretaryships of Hutton and Rice may be permitted, it would be that during the first phase the Society devoted its principal efforts to its major task of developing and disseminating technical knowledge, while during the second phase it decentralized its organization, expanded its membership and the number and variety of its activities and interests, and exerted its influence in the advancement of industrial management and the application of engineering principles to the less technical problems of industry so brilliantly attacked by Frederick W. Taylor, and in cooperative relationship with other societies at home and abroad for the benefit of the engineering profession.

Marking the spirit as well as the beginning of this second phase was the construction, through the munificence of Andrew Carnegie, of the Engineering Societies Building in New York, headquarters of the four founder societies by whom, through the United Engineering Trustees, Inc., the property is now administered. The building itself was an outcome of a desire on the part of the societies to provide a common depository for their individual libraries, operated today as the Engineering Societies Library. From this successful endeavor in cooperation, many others have since followed, such as the Engineering Societies Personnel Service, the Engineering Foundation and the Engineers' Council for Professional Development.

The pattern of the third phase of the Society's development was characterized by a growing concern for the engineer as a professional man, for engineering as one of the learned professions, and for the opportunities and obligations of public service, which involve economic and sociological as well as ethical, educational, and financial considerations, and, during the last few years, assistance in every way possible to the war program. In terms of Society administration the present phase is, like the two previous phases, roughly coincident with the secretaryship, held since the death of Calvin W. Rice in 1934, by Col. C. E. Davies, now on leave of absence for service with the Ordnance Department in Washington.

Major Objectives

In 1937 The American Society of Mechanical Engineers materially revised its constitution, by-laws, and rules, and restated its objectives in the following form:

The objects of this Society are to promote the art and science of mechanical engineering and the allied arts and sciences; to encourage original research; to foster engineering education; to advance the standards of engineering; to promote the intercourse of engineers among themselves and with allied technologists; and severally and in cooperation with other engineering and technical societies to broaden the usefulness of the engineering profession.

The Society may approve or adopt any report, standard, code, formula, or recommend practices, but shall forbid and oppose the use of its name, emblem, or initials in any commercial work or business, except to indicate conformity with its standards or recommended practices. . . .

Administrative Organization

Management of A.S.M.E. affairs is in the hands of a board of directors, chosen from its membership and styled the Council, which has full control over the activities of the Society subject to the limitations of the Constitution. The directors consist of the president, seven vice presidents, nine managers, all of whom are elected by letter-ballot of Society members following nomination by a national, geographically representative commitee. The last five surviving past presidents are also members of the Council.

The officers consist of the President, seven vice presidents, the Treasurer, and the Secretary. The President is elected for a term of one year. It is his duty to appoint members of all Society committees and all representatives of the Society, subject to confirmation by the Council. The vice presidents serve two-year terms, and the managers, three-year terms. Every year the Council itself appoints a secretary, who is the only salaried officer, and a treasurer. The Secretary and the Treasurer, who have no vote on the Council, are the only Society officers who may immediately succeed themselves. Chairmen of 16 standing committees serve on the Council as advisory representatives without vote.

An Executive Committee, of which the President is chairman, meets monthly to conduct business between meetings of the entire Council. With the President, two vice presidents, and two managers and, as ad-

visory members, the chairmen of the Committees on Finance, Local Sections, and Professional Divisions, serve on this committee.

Standing Committees

Sixteen standing committees, under the direction of the Council, supervise the extensive activities of the Society and advise the Council on matters relating to their fields of authority. These committees are as follows: Finance, Meetings and Program, Publications, Professional Divisions, Research, Local Sections, Admissions, Professional Conduct, Constitution and By-Laws, Library, Education and Training for the Industries, Relations with Colleges, Standardization, Safety, Power Test Codes, and Honors and Awards. There are also, at present, 19 special committees of the Council.

A Board on Technology coordinates the policies of committees whose activities include overlapping fields of interest. The chairman of this board is a member of the Council, and committees whose interests are involved have representatives on it. On the Advisory Board on Technology are representatives of the standing committees on Meetings and Program, Professional Divisions, Publications, Research and Local Sections, and two "members at large."

Local Sections

With the approval of the Council and under the supervision of the Committee on Local Sections, 70 groups of members of the A.S.M.E. have been organized and are functioning as local sections in as many industrial centers throughout the United States. Every member of the Society residing in the United States is a member of some one of these sections, and through this local membership he has the privilege of enjoying a program of local activities.

Professional Divisions

In addition to the grouping in local sections on a geographical basis, the membership of the A.S.M.E. is also organized along lines of professional or technical interests. The groups thus set up are known as the professional divisions. Without payment of special dues, every member is permitted to register in any of the 18 professional divisions. Registration in a division entitles the member to receive notices of meetings sponsored by that division and any special publications issued gratis by it, and otherwise to take part in its affairs.

In effect, a professional division is a technical society within the organization of the parent society. Subject to the rules and policies of the Society and under the general supervision of the Committee on Professional Divisions, a division conducts its own affairs. It has its own executive and special committees. It may engage in many activities, such as the holding of national meetings or joint meetings with other societies. It sponsors sessions at meetings and provides the program, papers, and special features that are appropriate to such occasions.

The professional divisions of the Society are: Applied Mechanics, Aviation, Fuels, Graphic Arts, Heat Transfer, Hydraulic, Management, Materials Handling, Metals, Engineering, Oil and Gas Power, Petroleum, Power, Process Industries, Production Engineering, Railroad, Textile, Wood Industries, and Instruments and Regulators.

Student Members in Branches

A great reservoir of potential A.S.M.E. members exists in the 6,000 students who are organized in the 120 A.S.M.E. Student Branches under the supervision of the Committee on Relations With Colleges. Student Branches may be established in any institution whose mechanical-engineering curriculum is accredited by Engineers' Council for Professional Development. Each student member receives *Mechanical Engineering* for eight months of the school year. Upon graduation, a student member may apply for junior membership. Provided he is elected and makes payment of his dues within a specified time, the student member is charged no transfer fee upon becoming a junior member.

The Secretary

The principal responsibility of the Secretary is threefold: The first is to carry out the duties laid down in the Constitution and By-Laws (actually in the By-Laws there are 45 references to the responsibility of the Secretary). This involves supervision of the headquarters and administration of the policies and procedures laid down by the Council and the committees. Second, he must keep in touch with the point of view of the members of the Society and present it to the Council and the standing committees. Third, he must be alert to the general problems of the profession through intimate contact with its joint agencies and other engineering societies. He also has responsibilities in connection with public relations and, in addition to the Council, he serves the dozen or so special and standing committees.

Publications

The publications of the Society are: *Mechanical Engineering,* a monthly journal, of which 64 volumes have been published; *Transactions,* 64 volumes, also issued monthly, four issues of which are known as the *Journal of Applied Mechanics.* The Society *Records* are also part of the *Transactions.* An annual *Mechanical Catalogue and Membership List* are also issued. Other publications, i.e., codes, standards, and special books and pamphlets, are published at irregular intervals.

Technical Committees, Codes, etc.

There are now 18 research committees of the A.S.M.E. working on 19 special projects. During the year 1942, 31 meetings of these committees were held in New York and at other cities throughout the country.

In 1911 the Boiler Code Committee was formed to formulate a series of safety codes for the construction and operation of boilers and pressure vessels.

The above and the standards of the power test code have been widely used both to provide standards for acceptance and to protect employees and the public against certain hazards related to power.

Awards

In 1919 the Standing Committee on Awards (now Board of Honors and Awards) was established to administer Society awards. They are: A.S.M.E. Medal, Holley Medal (named for Alexander Lyman Holley, pioneer steel engineer), Worcester Reed Warner Medal (Warner was a leading machine tool builder), Melville Medal in memory of Admiral Melville, Spirit of St. Louis Medal, Spirit of St. Louis Junior Award, Pi Tau Sigma Medal Award, Junior Award (annual cash award of $50 for best paper or thesis submitted by a Junior Member), Charles T. Main Award (annual cash award of $150 for best paper within the general subject of the influence of the profession upon public life), and Student Awards (two annual cash awards of $25 each for best papers or theses submitted by Student Members).

Special War Production Committees

The Society has special committees for the purpose of serving the war effort of the Government and, in addition, all regular committees are bending their efforts in that direction. The programs and papers are pointed at least 90 per cent at increasing production of war material. Over a year ago many of the 70 local sections held scrap salvage meetings, pointing out the need of industrial conservation of all scrap material. This was followed by six or eight meetings in different centers on the manufacture of shells of large caliber and as a result of that work research is now being conducted on shell manufacture under modern conditions. Since last April the Society has cooperated with other engineering groups in approximately 30 cities from coast to coast by holding a series of seven War Production Clinics with the object of enabling manufacturers of war material to come together and discuss with authorities their production problems.

A committee of outstanding production men advises the War Department on production matters and the chairman of this committee has given unstintingly of his time to address meetings of engineers in various parts of the country to emphasize the importance of this work.

Membership Grades and Dues

The classes of membership and the annual dues are: Honorary Member, none; Fellow, $25; Member, $20; Associate, $20; Junior Member until reaching the age of 30, $10; Junior Member between the ages of 30 and 33, $15; Junior Member after reaching the age of 33, $20; Student Member as provided in the By-Laws. At present the membership of the Society is 17,055.

Officers of the Association

President, Isaiah Bowman; *Permanent Secretary,* Forest R. Moulton; *General Secretary,* Otis W. Caldwell; *Treasurer,* W. E. Wrather; *Assistant Secretary,* Sam Woodley.

Executive Committee: Burton E. Livingston, *Chairman;* Roger Adams, Joseph W. Barker, Isaiah Bowman, Otis W. Caldwell, Walter B. Cannon, J. McKeen Cattell, Roy E. Clausen, Kirtley F. Mather, F. R. Moulton, and W. E. Wrather.

Membership in the Association

According to the Constitution, the objects of the Association are to promote intercourse among those who are cultivating science in different parts of America, to cooperate with other scientific societies and institutions, to give a stronger and more general impulse and more systematic direction to scientific research, and to procure for the labors of scientific men increased facilities and a wider usefulness. Members may reside in any country. A person desiring to become a member of the Association should fill in a membership application card that may be obtained from the Office of the Permanent Secretary and return it with his payment of $5.00 for one year's dues. Every member in good standing receives with his membership a subscription for either *Science* or *The Scientific Monthly.* Dues are for the fiscal year that begins October 1; the subscription begins the following calendar year. A member desiring to receive both journals concurrently may do so by paying $3.00 in addition to the regular dues. Members in good standing receive also, without extra charge, subscriptions for the A.A.A.S. BULLETIN, and they may purchase symposia publications at prepublication prices, and after publication at special prices to members.

A person who pays $100 during one fiscal year may be elected a life member; sustaining members pay $1,000. Both classes are exempt from the payment of further dues but are entitled to all the privileges of membership.

An incorporated scientific society or institution or a public or incorporated library may become a member by paying the entrance fee of $5.00 in addition to the dues. Such institution members are entitled to the same privileges as individual members.

Members are encouraged to nominate for membership persons who desire to cooperate in carrying out the objects of the Association. Names may be sent to the Office of the Permanent Secretary at any time. In the letter of invitation to become a member of the Association the name of the person making the nomination is ordinarily mentioned.

Changes of Address

New addresses for the Association's record and for mailing the journals *Science* and *The Scientific Monthly,* as well as the A.A.A.S. BULLETIN, should be in the Office of the Permanent Secretary, Washington 25, D. C., at least two weeks in advance of the date when the change is to become effective.